

Phosphoric and phosphorothioic esters containing heterocyclic groups - Communication 6. Reaction of phosphoric and phosphorothioic chlorides with benzimidazole and with morpholine

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Abstract

1. A study was made of the reactions of diethyl, diisopropyl, and diisobutyl phosphorochloridates, diethyl phosphorochloridothioate, and N,N,N',N'-tetraethyl-, N,N,N',N'-tetramethyl-, and N,N'-diphenylphosphorodiamidic chlorides with the sodium salt of benzimidazole. The corresponding phosphoric amido esters were obtained, and their properties were studied. 2. In the thermal decomposition of the phosphoric amido esters synthesized, products of the alkylation of benzimidazole were formed. 3. By the reaction of dimethyl, diethyl, diisopropyl, and diisobutyl phosphorochloridates, diethyl phosphorochloridothioate, N,N-dimethylphosphoroamidic dichloride, and N,N,N',N'-tetraethylphosphorodiamidic chloride with morpholine phosphoric amido esters and triamides containing morpholine groups were obtained. Their properties were studied. © 1965 Consultants Bureau Enterprises, Inc.

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